1978

A preliminary study on the growth and survival of stunted and non-stunted milkfish fingerlings

Lijauco, M. N.

Aquaculture Department, Southeast Asian Fisheries Development Center

Lijauco, M. N., Griño, E. G., Gerochi, D. D., & Rodriguez, E. M. (1978). A preliminary study on the growth and survival of stunted and non-stunted milkfish fingerlings. SEAFDEC Aquaculture Department Quarterly Research Report, 2(3), 35-36.

http://hdl.handle.net/10862/2330

A preliminary study on the growth and survival of stunted and non-stunted milkfish fingerlings

M. N. Lijauco, E. G. Griño, D. D. Gerochi and E. M. Rodriguez

In milkfish farming, stunted fingerlings are by and large preferred to non-stunted ones for stocking in grow-out ponds. This practice stems from the belief that stunted fingerlings exhibit faster rate of growth and would, therefore, give extra croppings than when ponds are stocked with newly-grown ones. Stunting period extends normally from four up to six months in ponds deliberately set aside for the purpose. But while this seemingly advantageous practice pervades in commercial farms, the argument against it rests mainly on the question of whether the incremental yields derived compensate the efforts and logistics required in stunting fingerlings, plus the necessity of using some areas as stunting ponds which reduces the hectarage for actual production. There is also the theoretical consideration that a fish has its inherent growth capacity, and that stunting does not essentially increase this capacity.

The present experiment was carried out to lend some information on the problem. The growth of stunted and non-stunted fish were compared.

Stunted and non-stunted fish averaging 7.6 g and 8.2 g respectively, were stocked at an aggregate rate of 3,300/ha in a 1,500 m^2 pond. The stunted fish were obtained from stock reared for about 1 year in an indoor tank, while the non-stunted fingerlings were reared in a nursery pond. To distinguish, the stunted fish were each fin-clipped at the left pectoral, and the non-stunted at the right pectoral fin. Fin-clipping was done after the fish were anaesthetized in a 33.3 ppm quinaldine sulfate solution. The fins were cut at the base and close to the body with the aid of a pair of surgical scissors and the wound cauterized using an electric soldering rod.

The fish were cultured for 137 days in the pond from October, 1977 through March, 1978. *Lab-lab* provided the main source of food. Stock samplings taken periodically provided measurements of growth. Using these data, the empirical growth curves are plotted as shown in Fig. 1.

Sample mean weights were almost identical up to day 37, differing slightly thereafter in favor of the stunted group. Final mean weights at inventory were 181.0 g and 172.2 g for stunted and non-stunted, respectively. There was no significant difference ($t = 0.61$ $t_{0.05}$, $n = 20$) in growth between the groups at 5% level of significance. However, the 100% survival rate recorded for the stunted fingerlings suggests that this group is hardier than the non-stunted group with 91.8%.

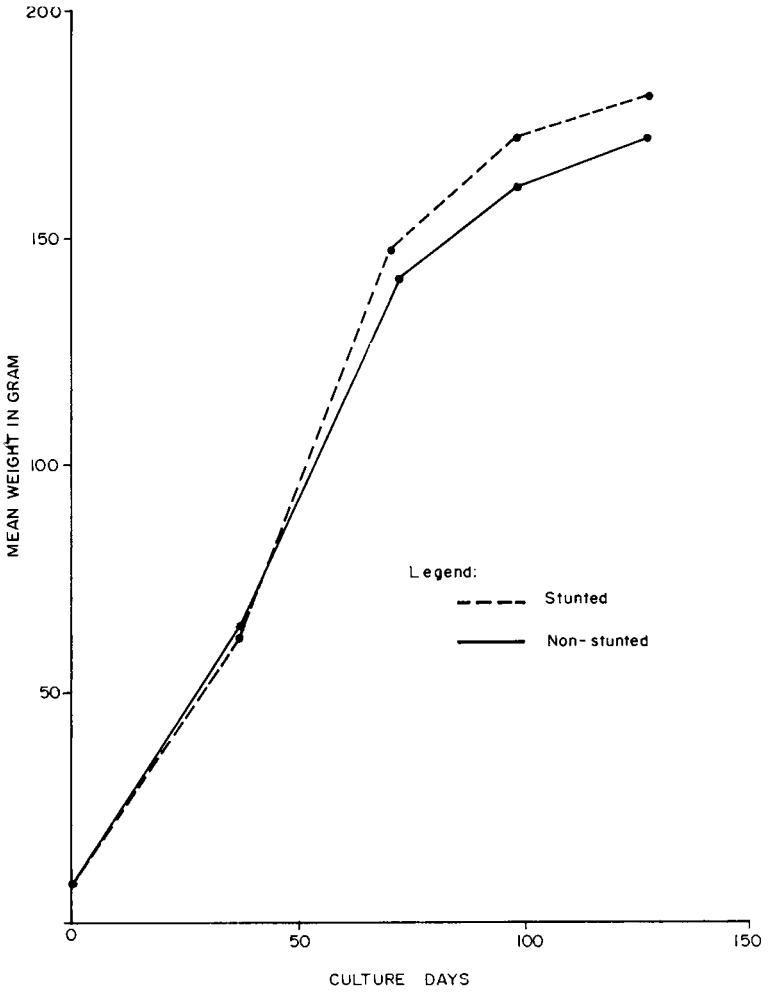

Fig. I. Growth reponse of Stunted and Non-stunted Milkfish fingerlings in ponds.

The present study is admittedly far from conclusive as to explain fully the growth responses of stunted milkfish fingerlings. With all its limitations the experiment produced data that relate to the probable outcome when stunting fingerlings for about one year. Additional studies should be undertaken on fingerlings that are stunted over various lengths of time.